PATENT ABSTRACTS OF JAPAN

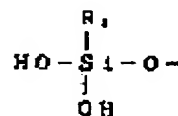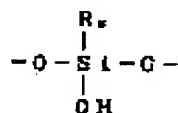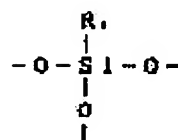## (54) RESIST MATERIAL, ITS MANUFACTURE, AND PATTERN FORMING METHOD USING SAME

(57)Abstract:

PURPOSE: To obtain the alkali-developable type resist material high in glass transition point, superior in O2 RIE resistance, and usable against energy rays in a wide range by composing the resist with a specified polysiloxane and an acid generating agent.
CONSTITUTION: The polysiloxane to be used has structural units each represented by formulae I–III and each unit combines with each other to form a siloxane bond and to form the siloxane, and the acid generating agent is used together with the polysiloxane. In formulae I–III, each of R1–R3 is an organic residue, and one or all of them has an oxirane rung. Such a resist material may contain an organic polymer having hydroxyl groups or an epoxy compound. It is preferred that a part of R1–R3 is a 2-(3,4-epoxycyclohexyl)-ethyl group and the other is a phenyl group and the acid generating agent is diphenyl-4-thiophenoxyphenylsulfoniumhexafluorophosphate.

$$-O-\underset{\underset{\text{O}}{|}}{\overset{\overset{\displaystyle R_1}{|}}{Si}}-O- \qquad I$$

$$-O-\underset{\underset{\text{OH}}{|}}{\overset{\overset{\displaystyle R_2}{|}}{Si}}-O- \qquad II$$

$$HO-\underset{\underset{\text{OH}}{|}}{\overset{\overset{\displaystyle R_3}{|}}{Si}}-O- \qquad III$$

LEGAL STATUS
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